MISSISSIPPI RIVER BASIN ALLIANCE
MINNEAPOLIS [HQ] • NEW ORLEANS

February 27, 2002

John Greis
USDA Forest Service
Southern Region
1720 Peachtree Rd., NW
Atlanta, Ga 30367

Dear Mr. Greis,

I am submitting the following comments on the Draft Southern Forest Resource Assessment (SFRA) Report on behalf of the Mississippi River Basin Alliance (MRBA.) MRBA is a non-profit organization with over 130 member groups along the length of the river. The health of the river system, its tributaries and sub-basins, is one of our key concerns, as is the health of the communities who depend on the river and related resources.

We welcome the opportunity to comment on the Draft SFRA Report, the undertaking of which represents a major challenge for the agencies charged with carrying out policies that protect the public interest. The many complex issues relating to the dramatic increase in timber production in the south, human-driven changes to watersheds, and ongoing changes in natural systems are of direct consequence to the environmental and economic health of the region, and of the Mississippi Alluvial Valley in particular. The Draft Summary of the Report recognizes (p.86) that "multiple forces of change are simultaneously affecting forest conditions [in the South.] " These changes also have direct effects on the hydrology and ecological condition of the river system.

A primary change in the Southeast and the Lower Mississippi Valley has been the removal of wetlands. The draft report notes that over 30 percent of the Southeast's historical forested wetlands have been lost, with an almost 80 percent loss in the Mississippi Alluvial Plain, and almost 7 million acres of forested wetlands have been lost in the Lower Mississippi Valley alone (AQUA-2, p.6, 17.) The report notes as well that "most of the…Southeastern forested wetlands that remain have been cutover at least once, and many are severely fragmented," a situation which "has contributed to the decline of many rare but wide-ranging species in the Southeast" (AQUA-2, p.11.)

The report is right to also take note of the extensive wetland restoration efforts which have been undertaken on marginal agricultural land in the Lower Mississippi Valley,

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through programs such as the Wetland and Conservation Reserve Programs run by USDA, and to recognize as well that success in restoring acreage and functions has often been limited (AQUA-2, p.1).

One of the Key Findings of this chapter (p.1) cites the National Wetland Inventory conclusion that 3.5 million acres of southern forested wetlands underwent changes between 1986 and 1997, and that ninety percent of the changes were "conversions to another wetland or aquatic habitat type," 95 percent of which were to scrub-shrub or emergent wetlands." It is not clear from the reference what the driving factor for this change was. Acreage figures are given for conversion to urban use and agriculture, and it is noted that 102,000 acres underwent "intensive silviculture." Clarification of this point will be helpful.

Concurrent with the effects of loss of wetlands on watershed health have been the effect of a wide range of other human activities. The report describes the increase in nutrient transport to streams, generally short-lived, that can result from timber harvesting operations, especially where best management practices (BMPs) are not applied (AQUA-3, p.13.) From a policy standpoint, this is one of many sections in the report that highlight the importance of ensuring that BMPs are widely implemented and that their effects are monitored and quantified.

The same chapter notes that fertilizer use is increasing on intensively managed pine plantations in the South (p.19), and that while use of BMPs can restrict application of fertilizers, pesticides, and herbicides to non-riparian zones, aerial applications are not so easily controlled (p.20.) Clearly, the role that increased aerial spraying of fertilizers in plantations plays in nutrient loading in streams and watersheds needs to be investigated further. This issue is especially important in the Mississippi River basin, where nitrogen loading to the river contributes to the formation of a large area of low oxygen (hypoxia) in the Gulf of Mexico that puts the most productive fishery in the lower 48 states at risk. (See *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico*, Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, January 2001; www.epa.gov/msbasin.)

While the report concludes that impacts on waterbodies from timber harvest operations are generally not significant, it also notes that "cumulative effects to water quality from forest practices are not well-documented" and are influenced by a range of other processes and activities (p.22.) We support the recommendations that "there is further need to investigate comprehensive biotic impacts from silviculture, including phytoplankton and macroalgal blooms, food-chain impacts, and potential microbial pathogen runoff," and that "additional research is necessary to assess the long-term cumulative nonpoint-source impacts of silvicultural activities on water quality and overall watershed health" (AQUA-3, p.23.)

The assessment of cumulative effects is critical. In many watersheds, timber operations are only one of the human impacts on streams and rivers. In the parishes on the northshore of Lake Pontchartrain in Louisiana, timber operations, dairy farming, and urban development occur along the same streams and rivers as the flow into the lake (actually a large estuary), adding to the "total loading of nutrients to downstream areas, particularly lakes and reservoirs" noted by the report (AQUA-3, p.12.) (While the timber industry, like the report, claims that the water quality impacts of silviculture are minimal, they have also provided some of the most intense resistance to the establishment of total maximum daily loads (TMDLs) for impaired waterbodies.)

An overarching question for all the issues examined in the draft report is the projected impact of climate change on the region and its natural systems. The Chapter dealing with the effects of abiotic factors on forest health (HLTH-3) states that "it is important to recognize the integrated nature of these abiotic stressors and their cumulative effects on forest ecosystems... when interpreting the results and conclusions from this Chapter" (p.3)

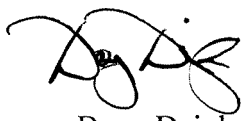
This consideration needs to be applied to the integration of human impacts on the landscape with climate impacts on natural systems and processes. The report notes that under the more severe climate scenarios, catastrophic fires could contribute to rapid conversion of forest areas to savannas (HLTH-3, p.17.) It would be helpful to have the final version of the SRFA report evaluate what impact large-scale conversion to pine plantations could have on the projected changes.

The report states "forest productivity in the South will likely increase over the next century as a result of atmospheric C02 enrichment, provided (1) precipitation and temperature changes do not offset the enrichment benefits by inducing water stress and (2) abiotic stressors such as 03 do not reduce growth rates significantly" (p.20), while also concluding that land use change will be the most important factor in determining carbon uptake and release (p.22.) However, the integrated nature of the changes facing southern forests mean that effects from higher temperatures, higher C02 levels, a more extreme hydrological cycle, and other changes will be felt together, not in isolation.

The report recognizes that the two primary climate models for the region, the Hadley and Canadian models, differ in their projections for precipitation patterns, and do not operate at a scale that allows precise regional predictions. However, the main point here would seem to be that the point of greatest uncertainty, precipitation, is also the real limiting factor. (The conclusions of a report released shortly before the release of the SFRA Draft, *Confronting Climate Change in the Gulf Coast Region*, Union of Concerned Scientists, Ecological Society of America, 2001, should be incorporated into the chapter on abiotic factors.)

Finally, the usefulness of the SFRA for policymakers as well as the general public will be greatly increased by reconciling in the final version the apparently contradictory conclusions and assertions that occur a number of times across and within chapters in the report. The complexity of the information presented, as well as the numerous projections and scenarios involved, no doubt play a role in this, but these inconsistencies complicate some of the most important issues examined by the report, such as growth to removal projections. Working for maximum accessibility and clarity in the final version of the report will maximize its benefit to the public.

Sincerely,



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